PATENT Attorney Docket No. SAM-151

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):

Won-Suk Yang, Sang-Ho Song, Hong-Sik Jeong, Ki-Nam Kim Herewith

Filing Date:

Title:

Bit Line Landing Pad and Borderless Contact on Bit Line Stud With Localized Etch Stop Layer Formed in Void Region, and Manufacturing



"Express Mail" Mailing Label Number EL596759607US I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated below and is addressed to BOX PATENT APPLICATION, Assistant Commissioner for Patents, Washington, DC 20231.

BOX PATENT APPLICATION

Assistant Commissioner for Patents

Washington, DC 20231

TRANSMITTAL LETTER

Sir:

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Enclosed herewith for filing in the above-identified patent application please find the following

- New Application Transmittal; 1.
- 2. New Patent Application; 3.
- Executed Declaration, Petition and Power of Attorney; 4.
- Five (5) Sheets of Informal Drawings; 5.
- Check in the amount of \$710.00 to cover requisite fee; 6.
- Assignment Recordation Form Cover Sheet - PTO-1595; 7.
- Executed Assignment;
- Check in the amount of \$40.00 to cover assignment recordation fee; 8.
- 9. Information Disclosure Statement;
- Information Disclosure Form---PTO-1449; 10. 11.
- Copies of Cited References; and
- 12. Return Postcard.

In connection with the foregoing matter, please charge any additional fees which may be due, or credit any overpayment, to Deposit Account Number 19-0079. A duplicate copy of this letter is provided for this purpose.

Respectfully submitted,

Date: Samuels, Gauthier & Stevens, LLP 225 Franklin Street, Suite 3300

Boston, MA 02110

Telephone: (617) 426-9180, Ext. 148

Facsimile: (617) 426-2275 K:\Samsung\151\transapp.wpd

Anthony P. Onello, J. Registration Number 38,572

Attorney for Applicant



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BOX PATENT APPLICATION Assistant Commissioner for Patents Washington, D.C. 20231

NEW APPLICATION TRANSMITTAL

ransmitted h	erewith for filing is the patent application of	MITAL
Inventor(s):	Won-Suk Yang Sang U.S.	
For (title):	Won-Suk Yang,, Sang-Ho Song, Hong-Si BIT LINE LANDING PAD AND BORDERLESS CONTACT ON BIT LINE STUD WITH LOCALIZED ETCH STOP LAYER FORMED IN VOID REGION, AND MANUFACTURING METHOD	CERTIFICATE OF MAILING 37 C.F.R. § 1.10 "Express Mail" Mailing Label Number EL596759607US I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the deal in the control of the service with the service under 37 CFR 1.10 on the deal in the control of the service with the service with the control of the service with

MANUFACTURING METHOD THEREOF 1. Type a(n)

MANUFACTURING METHOD THEREOF	Addressee" service under 37 CFR 1.10 on the date indicated above Commissioner for Patents, Washington DC 2023.
Type of Application This new application is for $a(n)$	Commissioner for Patents, Washington, DC 20231. Date: 19 30 00 Amy M. Flick
Original (nonprovisional)	Print Name M. Flick
Design	Take Name
□ Plant	

Divisional.
Continuation.
☐ Continuation-in-part (C-I-P).
- P).

Benefit of Prior Application(s)

The new application being transmitted claims the benefit of prior application(s) nos.

3. **Papers Enclosed**

Pages of specification
4 Pages of claims
Page of Abstract
5 Sheets of drawings □ formal □ informal □ Page of Cover Sheet

The enclosed drawing(s) are photograph(s), and there is also attached a "PETITION TO ACCEPT PHOTOGRAPH(S) AS DRAWING(S)." 37 C.F.R. 1.84(b).

4.	Addi	tional papers enclosed				
		Preliminary Amendment				
	\boxtimes	Information Disclosure Statement (37 C.F.R. 1.98)				
	\boxtimes	Form PTO-1449 (PTO/SB/08A and 08B)				
	\boxtimes	Copies of cited references				
		Declaration of Biological Deposit				
		Submission of "Sequence Listing," computer readable copy and/or amendment pertaining thereto for biotechnology invention containing nucleoticle and/or amino acid sequence.				
		Authorization of Attorney(s) to Accept and Follow Instructions from Representative				
		Special Comments				
	\boxtimes	Other: Return Postcard.				
5.	Dec	laration or oath				
	\boxtimes	Enclosed				
		☐ Unexecuted				
		⊠ Executed by				
		⊠ inventors				
		legal representative of inventor(s).				
		37 CFR 1.42 or 1.43.				
		joint inventor or person showing a proprietary interest on behalf of inventor who refused to sign or cannot be reached.				
		This is the petition required by 37 CFR 1.47 and the statement required by 37 CFR 1.47 is also attached. See item 12 below for fee.				
		Not Enclosed				
		Application is made by a person authorized under 37 C.F.R. 1.41 (c) on behalf of all the above named inventor(s).				
		Showing that the filing is authorized.				
6.	Assig	nment				
	\boxtimes	An assignment of the invention to Samsung Electronics Co., Ltd.				
		is attached. A separate □ "COVER SHEET FOR ASSIGNMENT (DOCUMENT) ACCOMPANYING NEW PATENT APPLICATION" or ☑ FORM PTO 1595 is also attached. will follow.				

7. Certified Copy

Certified copy(ies) of application(s)

Country	Appln. no.	Filed	
Country	Appln. no.	Filed	
Country	Appln. no.	Filed	

from which priority is claimed

- is (are) attached.
- □ will follow.

8. Fee Calculation (37 C.F.R. 1.16)

		C	LAIMS AS FILED		
	Number fil	led	Number Extra	Rate	Basic Fee 37 C.F.R. 1.16(a) \$710.00
Total Claims (37 CFR 1.16(c))	17	- 20 =	0	\$ 18.00	
Independent Claims (37 CFR 1.16(b))	2	- 3 =	0	\$ 80.00	
Multiple dependent claim if any (37 CFR 1.16(d))	(s),		+	\$260.00	

- ☐ A Preliminary Amendment canceling claims is enclosed. The filing fee is calculated based on the number of claims remaining after entry of the Preliminary Amendment.
- ☐ Amendment deleting multiple-dependencies is enclosed.
- ☐ Fee for extra claims is not being paid at this time.

Filing Fee Calculation

\$<u>710.00</u>

9. S	mall Entity Statement(s)
	☐ Verified Statement(s) that this is a filing by a small entity under 37 CFR 1.9 and 1.27 is (are) attached.
	☐ Status as a small entity was claimed in prior application, filed on
	from which benefit is being claimed for this application under:
	35 U.S.C. □ 119(e),
	\square 120,
	\square 121,
	□ 365(c),
	and which status as a small entity is still proper and desired.
	☐ A copy of the verified statement in the prior application is included.
	Filing Fee Calculation (50% of A, B or C above)
	\$
10.	Fee Payment Being Made at This Time
	□ Not Enclosed
	No filing fee is to be paid at this time. (This and the surcharge required by 3 7 C. F.R. 1.16(e) can be paid subsequently.)
	⊠ Enclosed
	Basic filing fee \$_710.00
	Recording assignment
	(\$40.00; 37 C.F.R. 1.21(h)) (See attached "COVER SHEET FOR ASSIGNMENT
	ACCOMPANYING NEW APPLICATION".) \$ 40.00
	`
	Total fees enclosed \$\frac{750.00}{}
11.	Method of Payment of Fees
	☑ Checks in the amounts of \$_710.00, 40.00
	Charge Account No. 19-0079 in the amount of A duplicate of this transmittal is attached.

12. Authorization to Charge Additional Fees

M	The Commissioner is hereby authorized to charge the following additional fees during the entire pendency of this application to Account No. 19-0079.
	☑ 37 C.F.R. 1.16(a), (f) or (g) (filing fees)
	☑ 37 C.F.R. 1.16(b), (c) and (d) (presentation of extra claims)
	☐ 37 C.F.R. 1. 1 6(e) (surcharge for filing the basic filing fee and/or declaration on a date later than the filing date of the application)
	☐ 37 Ć.F.R. 1.17 (application processing fees)
	□ 37 C.F.R. 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. 1.311(b))

13. Instructions as to Overpayment

- ☑ Credit Account No. 19-0079
- ☐ Refund

Date: YUGOU 50, 2000 Samuels, Gauthier & Stevens, LLP 225 Franklin Street, Suite 3300 Boston, MA 02110

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Respectfully submitted,

Anthony P. Onello, Jr.
Registration Number 38,572
Attorney for Applicant